National Institute of Environmental Health Sciences

Impacts of climate change on surface water quality in relation to drinking water production

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Abstract:

Besides climate change impacts on water availability and hydrological risks, the consequences on water quality is just beginning to be studied. This review aims at proposing a synthesis of the most recent existing interdisciplinary literature on the topic. After a short presentation about the role of the main factors (warming and consequences of extreme events) explaining climate change effects on water quality, the focus will be on two main points. First, the impacts on water quality of resources (rivers and lakes) modifying parameters values (physico-chemical parameters, micropollutants and biological parameters) are considered. Then, the expected impacts on drinking water production and quality of supplied water are discussed. The main conclusion which can be drawn is that a degradation trend of drinking water quality in the context of climate change leads to an increase of at risk situations related to potential health impact.

Source: http://dx.doi.org/10.1016/j.envint.2009.07.001

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Quality

Food/Water Quality: Biotoxin/Algal Bloom, Chemical, Pathogen

Geographic Feature:

resource focuses on specific type of geography

Freshwater

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified, Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: General Foodborne/Waterborne Disease

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content